

19

52

THE LATEST BILL ON THE FRM IN GREECE

The increased share of intermittent (i.e. variably operating) Renewable Energy Sources (RES) in the energy mix, leads to the assumption that power generation adequacy is not only about capacity margin. As the output of these resources is variable and not fully predictable, both adequate and flexible capacity to produce electricity is needed to avoid black-outs and ensure that electricity supply meets demand at any time.

Generation adequacy (the availability of sufficient resources capacity when needed, including activation of demand switching) and flexibility (the ability to adapt production or consumption to the system needs within a given timeframe) constitute the cornerstones of a reliable power system.

1. The interim report of sector inquiry on electricity capacity mechanisms by European Commission

On 29 April 2015, the European Commission initiated a sector inquiry on electricity capacity mechanisms adopted by the Member States. A year later, on 13 April 2016, the Commission invited the public to submit their views on the preliminary results of this state aid sector inquiry into electricity capacity mechanisms in the EU. The inquiry has found 28 past, existing or future capacity mechanisms in eleven examined Member States (Belgium, Croatia, Denmark, France, Germany, Ireland, Italy, Poland, Portugal, Spain and Sweden). Almost two thirds of the capacity mechanisms identified are targeted mechanisms, which benefit only specific types of capacity providers. On the contrary,

most of the mechanisms in planning are market-wide, in which all classes and categories of capacity providers can participate (for instance the French, Irish and Italian planned schemes).

Currently the most common capacity mechanisms are:

(a) the maintenance of 'a strategic reserve', within which governments pay providers for keeping power plants operational. These plants can be called upon by the network operator in emergency situations.

(b) the so-called 'interruptibility schemes', in which industrial customers are asked by the system operator to reduce their demand in scarcity situations. Such schemes are also considered a form of 'reserve', as they provide capacity that is only activated when a supply shortfall occurs.

Furthermore, tenders for new capacity were found in France, Ireland and Belgium. All three tenders were very specific on the size, technology type and location of capacity tendered out. Tenders may be an appropriate



temporary measure to incentivize investment in electricity generation capacity (including potentially in a specific location). However, a tender does not effectively address longer term generation adequacy problems, and should be combined with reforms to address underlying market and regulatory failures.

Targeted capacity payment schemes were found in Italy, Poland, Portugal, and Spain. The schemes typically cover one or more types of electricity generation (coal, gas, hydro with storage and sometimes oil). The price paid for capacity in these schemes is set administratively, rather than through a competitive tender process. In general, the beneficiaries of targeted capacity payments must make their capacity available during peak demand periods or face financial penalties. Targeted capacity payments also do not address the underlying issues that caused the capacity problem. An additional drawback of this model is that the administrative price setting process increases the risk of overcompensation of the beneficiaries.

2. The background of the Capacity Mechanisms in Greece

In accordance with the provisions of statute 4001/2011 (the Greek energy statute), Greek state designed in 2005 a decentralized 'Capacity Assurance

Mechanism' ('permanent CAM'). The mechanism was supposed to be based on the bilateral trading of capacity certificates. These were to be issued by dispatchable power plants in proportion to their capacity and were

Tender for new capacity	Strategic reserve	Targeted capacity payment
Belgium**	Belgium	Italy
France	Denmark**	Poland
Ireland**	Germany***	Portugal***
	Poland	Spain***
	Sweden	
	Germany (Interruptibility Scheme)	
	Ireland (Interruptibility Scheme)	
	Italy (Interruptibility Scheme)***	
	Poland (Interruptibility Scheme)	
	Portugal (Interruptibility Scheme)	
	Spain (Interruptibility Scheme)	
Central buyer	De-central obligation	Market-wide cap. payment
Ireland*	France*	Ireland
Italy*		

* Planned Mechanism (or being implemented)
 ** Past Mechanism (or never implemented)
 *** Multiple capacity mechanisms of the same type
 Source: European Commission, Capacity mechanisms sector enquiry



held by electricity suppliers and self-supplied consumers. Such certificate holders were under the obligation of holding a sufficient amount of capacity certificates to cover their load at peak times. However, the ‘permanent CAM’ has never been implemented because of the asymmetry between the vertically integrated incumbent (PPC) and the small independent generators which have not achieved direct load serving business. According to the Greek authorities, the mechanism would have allowed the incumbent to acquire capacity certificates internally, with the consequence that there would be no demand for capacity contracts addressed to the independent generators. In this scenario, the Greek authorities applied instead, a transitory capacity assurance mechanism consisting of direct remuneration of capacity availability of plants, which was in force until December 2014. This transitory mechanism provided for regulated remuneration based on a fixed payment for all eligible plants, excluding hydro power generation and natural gas generation plants. Hydro and natural gas plants received payment based on the real availability of capacity. However, pursuant to the rationale of decision no 338/2013 of RAE, the reform of the existing CAM was deemed necessary for ensuring capacity availability and security of supply; it highlighted that the existing CAM should be reassessed in line with the principle of proportionality and should be adjusted to the market rules and conditions taking into account the potential financial returns of each unit

arising from its participation in Day-Ahead Energy Scheduling (DAS).

Following the above decision, RAE put forward two consultations for the reform of the Capacity Remuneration Mechanism (CRM) in Greece, on 29.7.2014 and on 7.1.2015. RAE’s final proposal refers to the establishment of two mechanisms: a new permanent mechanism which shall operate on the basis of auctions for the purchase of necessary flexibility services for the System, and a transitory mechanism for the remuneration of flexibility (FRM). The final proposal is focused solely on one element of the initially proposed mechanism, namely the flexibility pillar.

4. Transitory Electricity Flexibility Remuneration Mechanism (‘transitory FRM’)

On 27.5.2016, statute 4389/2016 was published and amended the Energy Statute 4001/2011, with the aim to ensure electricity generation adequacy in the Greek interconnected system and system reliability through the establishment of a ‘transitory FRM’. Such remuneration scheme will operate for a maximum period of 12 months, during which time the level of remuneration will be defined by RAE.

The new statute interrupted the implementation of the permanent CAM, as provided for by the “Code on the Operation of the Greek Electricity Transmission System”. The ‘transitory FRM’ compensates certain electricity generators in the Greek interconnected

electricity system for the provision of ‘flexibility services’ to the Greek Electricity Transmission System Operator (TSO – ADMIE SA).

In particular, according to the provisions of the transitory flexibility remuneration scheme, on instruction from the TSO and subject to specified notice period, beneficiaries increase or decrease the amount of electricity injected into the electricity system at a specified minimum rate on a multi-hour time-scale. More specifically, any individual plant which is eligible for remuneration under the measure, should be capable of increasing electricity generation (ramping) at a rate greater than 8 MW/min with three hours’ notice (starting from hot conditions), while remaining available to follow ramping instructions continuously for a minimum of three hours. Therefore, the envisaged beneficiary generators must be located in Greece and be connected to the interconnected transmission system of the mainland. The above prerequisites can be satisfied by the following technologies: Combined Cycle Gas Turbine (CCGT), Open Cycle Gas Turbine (OCGT), Combined Heat and Power (CHP), and Hydro.

As provided for in the statute 4389/2016, in order that interested power generators participate in the new transitory mechanism, they shall first submit application to RAE. The template of such application is expected to be published by RAE following proposal from ADMIE SA. The applicants must declare the



capacity available for participation in the transitory mechanism. The declared capacity available can be lower than the real capacity of the generators. Furthermore, they must declare the nominal capacity of the plants and the compensation desired as incentive for providing ramping services. Finally, the generators must also declare the operating and maintenance (O&M) costs evaluation associated with the provision of ramping services. Within one month from the time of the said applications, RAE shall approve the registration of eligible units to the “Register of Flexible Generation Units” following proposal from ADMIE SA.

5. Compensation and Penalties

Remuneration for flexibility under the said scheme consists of a ‘capacity premium’, which is a fixed payment based on available capacity to provide ramping services, set administratively by RAE, at a level of €45/kW/year. In addition, the TSO will ensure that capacity premium revenues shall not exceed 15 million Euros per eligible power generation installation. The maximum total budget, amounting to 225 million Euros, shall be covered by ‘Load Representatives’ (electricity suppliers) and will be paid to the beneficiaries proportionally, according to the historical availability of their power plants, measured in MW, over the previous three years. In case the ‘eligible’ power plants are unavailable to comply with the obligations arising from their participation in the transitory FRM in real time, penalties will be imposed. In this case,

RAE, following proposal from ADMIE SA, can even claim the repayment of 10% to 100% of the remuneration, depending the severity of violation.

6. Financing of the measure

The measure will be financed by a special levy, set by RAE, imposed on Load Representatives, according to the provisions of the System Operation Code. The obligation imposed on each Load Representative relates to its maximum electricity demand measured during hours with increased loss-of-load-probability. The TSO (ADMIE SA) will be responsible for:

- (a) calculating the payments awarded under the measure,
- (b) issuing the settlements and
- (c) performing the respective invoicing.

7. Assessment of the transitory FRM as state aid

Before the implementation of the discussed flexibility remuneration mechanism, on 19.1.2015 the Greek state notified the above discussed scheme to the European Commission. According to decision No C (2016) 1791 final of 31.3.2016 of the European Commission, the new transitory FRM was characterized as ‘state aid’, given that it is financed through compulsory charges imposed by the legislation of the Member State, managed and apportioned in accordance with the provisions of such legislation, even if the levies imposed are managed by entities separate from the public authorities.

Furthermore, this financing scheme allows beneficiaries to receive an additional compensation beyond which they would obtain in the Greek electricity market, therefore will confer an economic advantage to these undertakings in one sector of the economy (electricity production). Therefore this advantage is selective, affecting trade within the internal European market.

In line with the Commission’s demands, in order to be found appropriate, this State aid should: (i) only compensate the service of availability of capacity (ii) be open and provide adequate incentives to both existing and future generators and to operators using substitutable technologies, and (iii) take into account the extent to which interconnected capacity can contribute to remedy the generation adequacy concerns. Under said conditions, the Commission has authorized the transitory FRM scheme for 12 months following the date of its adoption.

